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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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12/09/2003

Seok-Goun Lee

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EXAMINER

BEMBEN, RICHARD M

ART UNIT

PAPER NUMBER

2622

MAIL DATE

DELIVERY MODE

09/21/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/731,861	Applicant(s) LEE, SEOK-GOUN	
	Examiner Richard M. Bemben	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 14-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10-13 and 25-28 is/are rejected.
- 7) ☐ Claim(s) 5-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/22/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species:

- (1) claims 1-13, directed to measuring a first average brightness on the raising edge of a second readout pulse and measuring a second average brightness on the raising edge of a third readout pulse;
- (2) claims 14-22, directed to measuring a first average brightness on the falling edge of a second readout pulse and measuring a second average brightness on the falling edge of a third readout pulse;
- (3) claim 23, directed to measuring a first average brightness on the raising edge of a second readout pulse and measuring a second average brightness on the falling edge of a third readout pulse;
- (4) claim 24, directed to measuring a first average brightness on the falling edge of a second readout pulse and measuring a second average brightness on the raising edge of a third readout pulse;

The species are independent or distinct because they require at least different functionality.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 25-28 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

2. During a telephone conversation with Brian C. Rudd on 5 September 2007 a provisional election was made with traverse to prosecute the invention of species (1), claims 1-13. Affirmation of this election must be made by applicant in replying to this Office action. Claims 14-24 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

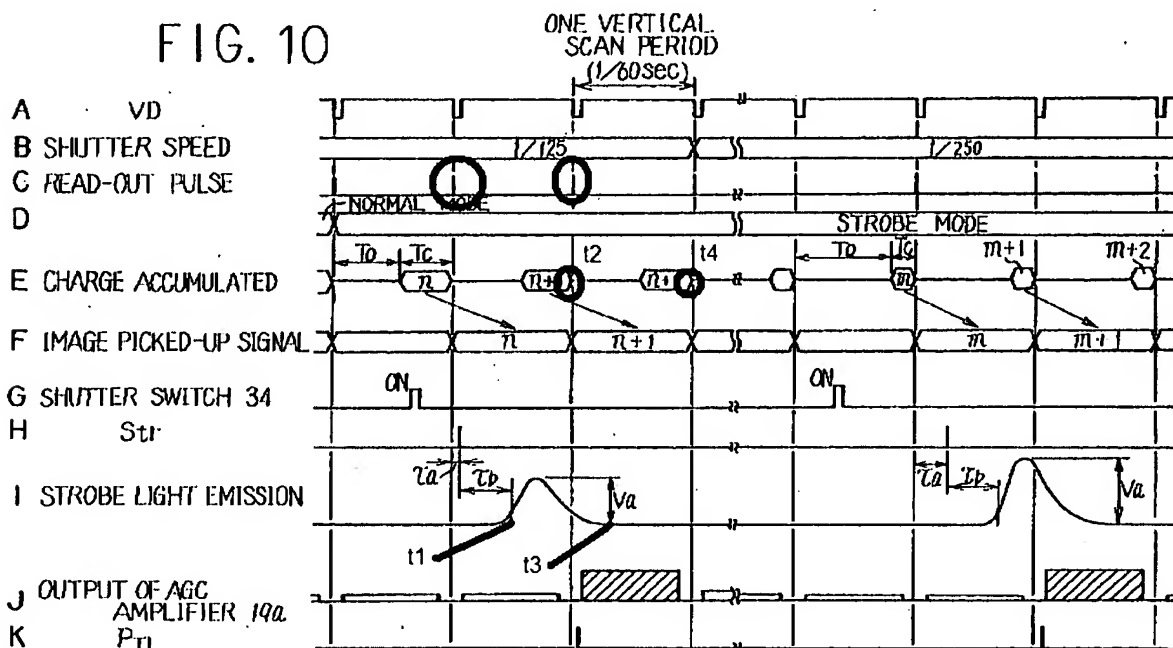
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4. Claims 1-4, 10, 11, 13 and 25-28 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,539,456 issued to Ishii.

Regarding claim 1, Ishii discloses a method of performing preliminary flashing for a camera, the method comprising:

generating a first readout signal pulse; performing preliminary flashing at a time t_1 after the rising edge of the first readout signal; generating the rising edge of a second readout signal pulse at a time t_2 that is after time t_1 ; measuring a first average brightness at time t_2 (collecting the accumulated charge); ending preliminary flashing at a time t_3 after time t_2 ; generating the rising edge of a third readout signal pulse at a time t_4 ; and measuring a second average brightness at time t_4 (collecting the accumulated charge).

Refer c. 10, ll. 4-67 and to the marked image of Fig. 10 below:



Regarding **claim 2**, Ishii further discloses that the rising edge of the readout signal pulses are generated after the falling edge of the vertical sync signals (Fig. 10, "A" and "C").

Regarding **claim 3**, Ishii further discloses that the first average brightness is measured exactly at time t_2 (refer to claim 1).

Regarding **claim 4**, Ishii further discloses that the second average brightness is measured exactly at time t_4 (refer to claim 1).

Regarding **claim 10**, Ishii further discloses performing main flashing (Fig. 10, the second strobe emission).

Regarding **claim 11**, Ishii further discloses that the main flashing is performed a set time after t_3 (Fig. 10).

Regarding **claim 13**, Ishii further discloses that the camera is a digital camera (c. 6, ll. 25-30, "CCD").

Regarding **claim 25**, Ishii discloses a camera comprising:
an image sensing portion (Fig. 18, "12"; c. 6, ll. 25-30; c. 14, ll. 39-44);

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an image signal processing portion (at least Fig. 18, "13, 19, 20, 21, 22, 23, 26, 24, 25, 28");

a light emitting device (Fig. 18, strobe "9");

a light emission driving portion (c. 14, ll. 61-65; Fig. 18, "39");

a microcontroller that generates a control signal and transmits the control signal to the light emission driving portion (c. 14, l. 61 – c. 15, l. 23; Fig. 18, "27");

and a timing signal generator that generates both a read-out signal and a vertical sync signal and transmits each of the read-out signal and the vertical sync signal to both the image sensing portion and the microcontroller (c. 7, ll. 18-27; Fig. 18, "14").

Regarding **claim 26**, Ishii further discloses that the read-out signal comprises substantially smaller pulses than the vertical sync signal (Fig. 10, "A" and "C").

Regarding **claim 27**, Ishii further discloses that the rising edge of each read-out signal is generated after the falling edge of each vertical sync signal (Fig. 10, "A" and "C").

Regarding **claim 28**, Ishii further discloses that the camera is a digital camera (refer to the rejection of claim 25).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii in view of US 5,950,023 issued to Hara et al., hereinafter "Hara".**

Regarding **claim 12**, Ishii discloses a method of producing a preliminary flash and a main flash that are off set by a time period. However, Ishii does not disclose that that time is 760 ms.

Hara discloses that it is well known to offset a main flash by about .75 second from a preliminary flash in order to reduce red-eye (c. 2, ll. 26-38). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to offset the main flash from the preliminary flash by 760 ms as disclosed by Hara in the method disclosed by Ishii in order to avoid red-eye.

Allowable Subject Matter

7. Claims 5-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Iwasaki et al. (US 6,272,292) discloses an electronic flash unit is caused to perform a pre-flash immediately before a photographing operation, and the quantity of light reflected by the subject during the pre-flash is measured by a flash metering unit.

Nakajima (US 6,069,659) discloses a strobe device and its flashing method for use with an electronic camera of the present invention are such that a preliminary flashlight to set the amount of light of the main flashing is received by a CCD, the amount of light of the main flashing is set on the basis of the signal from the CCD, the time interval between the preliminary flashing and the main flashing is set to a time that prevents the photographer from recognizing fluctuations in the luminance.

Suh (US 5,946,035) discloses a flash control method for an interline charge coupled device (CCD) camera, in which two photographic fields of an object are used to form one frame, is disclosed. The method comprises the step of storing an equation defining the relationship between a light emission amount of a flash, a flash voltage, and a light emission time for the flash.

Momose et al. (US 6,753,920) discloses an electronic camera for producing a composite image having a wide dynamic range and a high quality by composing

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first and second image signals obtained by picking-up an object successively two times with first and second stroboscopic flash exposures having a predetermined exposure amount ratio.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard M. Bemben whose telephone number is (571) 272-7634. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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TUAN HO
PRIMARY EXAMINER